

REMARKS

Applicants respectfully request reconsideration of the present application in view of the reasons that follow.

Status of the Claims

Claims 15-20 were pending in the subject application, of which claims 17-20 and 22-28 have been withdrawn from consideration. Claims 15, 16 and 21 are rejected and are pending under active consideration.

Rejections under 35 U.S.C. § 102

Claims 15, 16 and 21 stand rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 4,8851,377 (hereafter "Breault). Claim 15 is the independent claim and claims 16 and 21 depend therefrom. Applicants respectfully traverse this rejection.

Claim 15 defines a fuel cell comprising: (1) an electrolyte membrane, and (2) a cathode catalyst layer containing a metal catalyst and facing a surface of the electrolyte membrane. The cathode catalyst layer comprises a specific region and a region other than the specific region, both of which face the surface of the electrolyte membrane. The specific region generates a larger differential electric potential between the cathode catalyst layer and the electrolyte membrane during an electric power generation reaction of the fuel cell than in the region other than the specific region, wherein one of an amount of the metal catalyst and a specific surface area of the metal catalyst in the cathode catalyst layer in the specific region has a larger value than in the region other than the specific region.

The Examiner stated that by teaching a fuel cell electrode with a non-uniform catalyst with an increase in catalyst loading toward the outlet side of the cell, he is able to provide the electrode with substantially uniform current density (see col. 5, lines 56-62).

We agree that Breault achieved an electrode with substantially uniform current density by providing a non-uniform catalyst with an increase in catalyst loading toward the outlet side of the cell. Breault also achieved an even differential electric potential between the cathode catalyst layer and the electrolyte membrane during an electric power generation reaction of

the fuel cell in the specific region and in the region other than the specific region as can be seen in Figure 2 of Breault.

However, unlike Breault, pending Claim 15 defines the specific region generating a larger differential electric potential between the cathode catalyst layer and the electrolyte membrane during an electric power generation reaction of the fuel cell than in the region other than the specific region. Breault does not cause the specific region to generate a larger differential electric potential between the cathode catalyst layer and the electrolyte membrane during an electric power generation reaction of the fuel cell than in the region other than the specific region.

Instead, Breault teaches leveling out the differential electric potential between the cathode catalyst layer and the electrolyte membrane during an electric power generation reaction of the fuel cell in the specific region and in the region other than the specific region rather than to cause these two regions to have a differential electric potential.

As a result, the fuel cell according to Breault can not cause the specific region to generate a larger differential electric potential between the cathode catalyst layer and the electrolyte membrane during an electric power generation reaction of the fuel cell than in the region other than the specific region as the present invention does.

Accordingly, Applicants submit that the invention recited in Claim 15 is not anticipated by Breault.

CONCLUSION

Applicants believes that the present application is now in condition for allowance. Favorable reconsideration of the application as amended is respectfully requested. The Examiner is invited to contact the undersigned by telephone if it is felt that a telephone interview would advance the prosecution of the present application.

The Commissioner is hereby authorized to charge any additional fees which may be required regarding this application under 37 C.F.R. §§ 1.16-1.17, or credit any overpayment, to Deposit Account No. 19-0741. Should no proper payment be enclosed herewith, as by a check being in the wrong amount, unsigned, post-dated, otherwise improper or informal or even entirely missing or a credit card payment form being unsigned, providing incorrect information resulting in a rejected credit card transaction, or even entirely missing, the Commissioner is authorized to charge the unpaid amount to Deposit Account No. 19-0741. If

any extensions of time are needed for timely acceptance of papers submitted herewith,
Applicant hereby petitions for such extension under 37 C.F.R. § 1.136 and authorizes
payment of any such extensions fees to Deposit Account No. 19-0741.

Respectfully submitted,

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